Red Hat Training and Certification

DO280
Red Hat OpenShift Administration II: Configuring a Production Cluster

Configure and manage OpenShift clusters to maintain security and reliability across multiple applications and development teams.

Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster (DO280) prepares OpenShift Cluster Administrators to perform daily administration tasks on clusters that host applications provided by internal teams and external vendors, enable self-service for cluster users with different roles, and deploy applications that require special permissions such as such as CI/CD tooling, performance monitoring, and security scanners. This course focuses on configuring multi-tenancy and security features of OpenShift as well as managing OpenShift add-ons based on operators.

The skills you learn in this course can be applied using all versions of OpenShift, including Red Hat OpenShift on AWS (ROSA), Azure Red Hat OpenShift, and OpenShift Container Platform.

This course is based on OpenShift Container Platform 4.14.

Course content summary

- Deploying packaged applications using manifests, templates, kustomize, and helm.
- Configuring authentication and authorization for users and applications.
- Protecting network traffic with network policies and exposing applications with proper network access.
- Deploying and managing applications using resources manifests.
- Enabling developer self-service of application projects.
- Managing OpenShift cluster updates and Kubernetes operator updates.

Target Audience

- Platform Administrators, System Administrators, Cloud Administrators, and other infrastructure-related IT roles who are responsible for managing and maintaining infrastructure for applications

- Enterprise Architects, Site Reliability Engineers, DevOps Engineers, and other application-related IT roles who are responsible for designing infrastructure for applications

Outline for this course

- **Declarative Resource Management**
  Deploy and update applications from resource manifests that are parameterized for different target environments.

- **Deploy Packaged Applications**
  Deploy and update applications from resource manifests that are packaged for sharing and distribution.

- **Authentication and Authorization**
  Configure authentication with the HTPasswd identity provider and assign roles to users and groups.

- **Network Security**
  Protect network traffic between applications inside and outside the cluster.

- **Expose non-HTTP/SNI Applications**
  Expose applications to external access without using an Ingress controller.

- **Enable Developer Self-Service**
  Configure clusters for safe self-service by developers from multiple teams and disallow self-service if projects have to be provisioned by the operations staff.

- **Manage Kubernetes Operators**
  Install and update Operators that are managed by the Operator Lifecycle Manager and by the Cluster Version Operator.

- **Application Security**
  Run applications that require elevated or special privileges from the host Operating System or Kubernetes.

- **OpenShift Updates**
  Update an OpenShift cluster and minimize disruption to deployed applications.

As a result of attending this course, students will be able to perform the set of tasks that OpenShift cluster administrators are expected to perform in their daily jobs for on-premises, cloud-based, and vendor-managed clusters, including enabling add-on operators. Students will also be able manage multi-tenant permissions for different roles and configure applications that require privileged access to cluster and host resources.

Course reference: https://www.redhat.com/en/services/training/red-hat-openshift-administration-ii-configuring-a-production-cluster